

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (original) Photoresist composition suitable for use at 10-165 nm comprising:
 - (a) a polymeric binder
 - (b) a photoactive compound
 - (c) a dissolution inhibitor, the dissolution inhibitor comprising at least
 - (i) two aromatic groups,
 - (ii) fluorine and
 - (iii) a blocked acid group which when unblocked has a $pK_a < 12$.
2. (original) Photoresist composition according to claim 1 wherein the photoresist composition generally will contain:
 - (a) about 50 to about 99.5 wt% polymeric binder
 - (b) about 0 to about 10 wt% photoactive compound
 - (c) about 0.5 to about 50 wt% dissolution inhibitor relative to the total (a) + (b) + (c).
3. (currently amended) Photoresist composition according to ~~any one of claims 1-2~~ claim 1 wherein the composition has an absorption coefficient of less than about $3 \mu\text{m}^{-1}$.
4. (currently amended) Photoresist composition according to ~~any one of claims 1-3~~ claim 1 wherein the dissolution inhibitor, when used at 10 wt% in a polymeric binder adds about $0.8 \mu\text{m}^{-1}$ or less to the absorbance coefficient of the composition.
5. (currently amended) Photoresist composition according to ~~any one of claims 1-4~~ claim 1 wherein the dissolution inhibitor has 2-5 aromatic atoms.

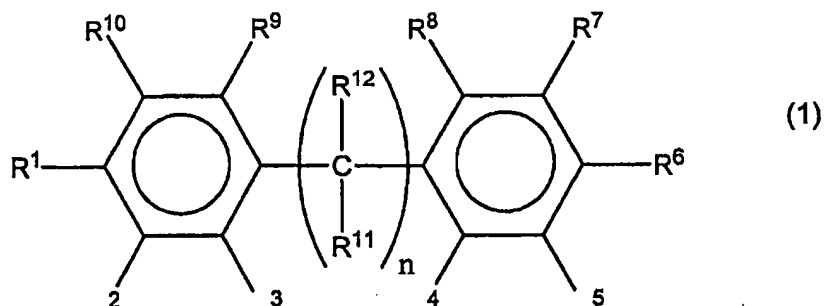
6. (currently amended) Photoresist according to ~~any one of claims 1-5~~ claim 1 wherein the dissolution inhibitor has 2 or more fluorine atoms.

7. (currently amended) Photoresist according to ~~any one of claims 1-6~~ claim 1 wherein the acid group is an hydroxyl group bound to an aromatic group, or a $C(CF_3)_2OH$ bound to an aromatic ring.

8. (currently amended) Photoresist according to ~~any one of claims 1-7~~ claim 1 wherein the acid group is at least partly blocked with a carbonate, acetal group, ortho ester, or tertiary alkyl group.

9. (currently amended) Photoresist according to ~~any one of claims 1-8~~ claim 1 wherein the dissolution inhibitor comprises a bisphenol structure.

10. (original) Compounds represented by formula 1[[.]]



in which $n = 1-4$

at least one of R^1-R^{10} independently comprise a (blocked) acid group, the group when unblocked has a $pK_a < 12$ [[.]].

the other R^1-R^{10} represent independently hydrogen, fluorine or hydrocarbonaceous substituents[[.]].

R^{11} is an aliphatic fluorinated group[[.]].

R^{12} represents hydrogen or an aliphatic group having 1-10 carbon atoms and 0-13 fluorine atoms,

and R¹¹ and R¹² are not both CF₃.

11. (original) Compound according to claim 10 wherein R¹¹ preferably is a C₂-C₁₀ group, having 2-20 fluorine atoms.

12. (currently amended) Compound according to ~~any one of claims 10-11~~ claim 10 wherein one of {R¹-R³, R⁹, R¹⁰} and one of R⁴-R⁸, independently, are preferably hydroxy or C(CF₃)₂OH, any of these optionally protected with an acid labile protecting group.

13. (currently amended) Compound according to ~~any one of claims 10-12~~ claim 10 wherein the other R¹-R¹⁰ independently, are hydrogen.

14. (currently amended) Compound according to ~~any one of claims 10-13~~ claim 10 wherein R¹² preferably is hydrogen.

15. (currently amended) Process for forming an etched layer in a chip ~~comprises~~ comprises, in order:

(A) forming a photoresist layer on a substrate wherein the photoresist layer is prepared from a photoresist composition comprising:

(a) a binder;
(b) a photoactive component; and
(c) the at least one dissolution inhibitor, the dissolution inhibitor comprising at least (i) two aromatic groups (ii) fluorine, and (iii) a (blocked) acid group which when unblocked has a pKa < 12

(B) imagewise exposing a photoresist layer to form imaged and non-imaged areas,

(C) developing the exposed photoresist layer having imaged and non- imaged areas to form the relief image on the substrate

(D) etching the substrate to a predetermined depth

(E) removing the relief image from the substrate.

16. (currently amended) A process for the production of a chip by using immersion lithography, comprising the step of forming a photoresist layer on a substrate, wherein the photoresist layer is prepared from a photoresist composition comprising:

- (a) a binder;
- (b) a photoactive component[.];
- (c) a fluor containing compound.